From:	So Kim
Sent time:	07/16/2018 04:26:24 PM
To:	Jill Martin <jmartin@trumpnational.com>
Subject:	FW: Trump
Attachments:	Water Control Plan_SR.pdf

From: So Kim
Sent: Monday, July 16, 2018 4:26 PM
To: 'Steve Wood' <swood@lrmltd.com>
Cc: Ron Dragoo <RonD@rpvca.gov>; Elias Sassoon <esassoon@rpvca.gov>
Subject: RE: Trump

Hi Steve,
Attached is the requested water control plan.

Sincerely,
So Kim, AICP
Deputy Director/Planning Manager
Community Development Department
City of Rancho Palos Verdes
www.rpvca.gov
(310) 544-5222

From: Steve Wood [mailto:swood@lrmltd.com]
Sent: Friday, July 13, 2018 10:26 AM
To: Elias Sassoon <esassoon@rpvca.gov>; So Kim <SoK@rpvca.gov>
Cc: Ron Dragoo <RonD@rpvca.gov>
Subject: RE: Trump

Elias,
I'm also looking for a Water Control Plan. Is that something that you may have a copy of? It's a document I need to reference.

So, you mentioned you didn't have a digital copy, if you have a hard copy can you scan it?

Steve Wood
Landscape Architecture

From: Elias Sassoon [mailto:esassoon@rpvca.gov]
Sent: Tuesday, July 03, 2018 4:20 PM
To: Steve Wood <swood@lrmltd.com>; So Kim <SoK@rpvca.gov>
Cc: Ron Dragoo <RonD@rpvca.gov>
Subject: RE: Trump

Steve:

I do NOT think that we have water/power in the median!

There is a water main along the PVD South. A connection can be made from this main line and water can be brought to the median by means of boring, with a meter/check-valve and back-flow device. The work/design has be coordinated and approved by CalWater.

Regarding the electrical connection for the controller, you would have to work with SCE and pull a permit and set-up a meter.
Question: Can you consider a solar controller??

We also need to potentially have a maintenance agreement for the proposed landscaping.

Thanks:

Elias K. Sassoon, Director
Department of Public Works

City of Rancho Palos Verdes
30940 Hawthorne Blvd.
Rancho Palos Verdes, CA 90275
Tel: 310-544-5335
Fax: 310-544-5292

From: Steve Wood [mailto:swood@lrmltd.com]
Sent: Tuesday, July 03, 2018 3:58 PM
To: Elias Sassoon <esassoon@rpvca.gov>; So Kim <SoK@rpvca.gov>
Cc: Ron Dragoo <RonD@rpvca.gov>
Subject: RE: Trump

Thanks Elias. I can wait till he gets back. I just need to know if there is water and power there and if not how to coordinate for it.
Thanks.

Steve Wood

From: Elias Sassoon [mailto:esassoon@rpvca.gov]
Sent: Tuesday, July 03, 2018 2:59 PM
To: So Kim <SoK@rpvca.gov>; Steve Wood <swood@lrmltd.com>
Cc: Ron Dragoo <RonD@rpvca.gov>
Subject: RE: Trump

Hi Steve:

You can contact Ron Dragoo. He is out this week, but will be in office next week. If you HAVE TO HAVE the info this week, pls let me know.

Thanks:

Elias K. Sassoon, Director
Department of Public Works
City of Rancho Palos Verdes
30940 Hawthorne Blvd.
Rancho Palos Verdes, CA 90275
Tel: 310-544-5335
Fax: 310-544-5292

From: So Kim
Sent: Tuesday, July 03, 2018 2:48 PM
To: Steve Wood <swood@lrmltd.com>
Cc: Elias Sassoon <esassoon@rpvca.gov>
Subject: RE: Trump

Hi Steve,
I copied Mr. Elias Sassoon (Public Works Director), who may be able to direct you to the correct City Staff that can assist you.

Sincerely,

So Kim, AICP
Deputy Director/Planning Manager
Community Development Department
City of Rancho Palos Verdes
www.rpvca.gov
(310) 544-5222

From: Steve Wood [mailto:swood@lrmltd.com]
Sent: Tuesday, July 03, 2018 2:38 PM
To: So Kim <SoK@rpvca.gov>
Subject: RE: Trump

And one other thing, since the planting for the median island is in the city right of way, do you have a contact for me in public works that I could ask about provision of irrigation water and power for an irrigation controller?
Thanks.

Steve Wood

From: Steve Wood
Sent: Tuesday, July 03, 2018 2:04 PM
To: 'So Kim' <SoK@rpvca.gov>
Subject: Trump

Hi So,
Can you tell me if this is the current coastal commission approved plant list? If not can you send me the current one? And also, do you have a copy of the water control plan? Jill is not seeming to find it.
Thank you.

L R M

Stephen Wood
Senior Associate/
Construction Contract
Administrator

10335 Jefferson Blvd,
Culver City, CA 90232
T 310.839.6600 x26 F 310.559.1310
www.lrmltd.com

Converse Consultants

Over 50 Years of Dedication in Geotechnical Engineering and Environmental Sciences

September 30, 2002

Douglas Wilson Companies
Ocean Trails Golf Course
One Ocean Trails Drive
Rancho Palos Verdes, California 90275

Attn: Mr. Jeff Kaplinski
Project Manager

Subject: **GEOLOGIC REVIEW OF PROPOSED WATER CONTROL REQUIREMENTS FOR THE OCEAN TRAILS RESIDENTIAL LOTS DATED SEPTEMBER 24, 2002**
Ocean Trails Development
Rancho Palos Verdes, California
Converse Project No. 02-31-210-01

Converse Consultants (Converse) has been requested by Ocean Trails to provide geologic review comments on the currently proposed water control requirements for the residential lots within the Ocean Trails development. A summary of the proposed water control requirements is presented in the Ocean Trails letter report dated September 24, 2002. This report describes the four documents which currently form the methods and means to regulate and control water use on the residential lots. A copy of the Ocean Trails September 24, 2002 report is attached for reference in Appendix A.

General recommendations for foundation design, expansive soils, building pad drainage, house plans, maintenance and irrigation are presented in Converse's April 10, 2000 As-Graded Geotechnical Report for Lots 1 through 36 in Tract No. 50667 and should be incorporated into future home development and landscaping plans once they are prepared.

It is our opinion the proposed water control requirements presented in these documents will provide adequate regulation to control water use on the residential lots provided the measures are properly implemented during the design, review, construction, landscaping and long-term maintenance phases of the project.

It should be noted that specific plans for home development and landscaping on each of the residential lots have not been prepared, reviewed or approved at this time. The Geotechnical Consultant of Record for each lot should review and approve the proposed home development and landscaping plans from a geotechnical standpoint

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once they are prepared and prior to submittal to the City of Rancho Palos Verdes Director of Planning, Building and Code Enforcement for review and approval.

Limitations

This letter report has been prepared for the sole benefit and exclusive use of our Client, VH Property Corporation, in accordance with the terms and conditions of our Master Services Agreement under which these services have been provided. Any reliance on this report by third parties shall be at third party's sole risk. Our services have been performed in accordance with applicable state and local ordinances, and generally accepted engineering geology principals and practices in Southern California at this time. No other warranty, either expressed or implied, is made.

Converse Consultants is not responsible or liable for any claims or damages associated with interpretation of available information provided by others. In the event that changes to the property occur, or additional, relevant information about the property is brought to our attention, the recommendations contained in this report may not be valid unless these changes and additional relevant information are reviewed and the recommendations of this report are modified or verified in writing.

CONVERSE CONSULTANTS

Mark B. Schluter, CEG 1415
Senior Engineering Geologist

MBS/dlr

Encl: Appendix A - Ocean Trails Water Control Report dated September 24, 2002

Dist: 6/Addressee

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APPENDIX A

OCEAN TRAILS WATER CONTROL REPORT
DATED SEPTEMBER 24, 2002

Ocean Trails

Golf Club at Palos Verdes

September 24, 2002

Mr. Greg Pfost
Deputy Planning Director
City of Rancho Palos Verdes
30940 Hawthorne Boulevard
Rancho Palos Verdes, California 90275-5391

Dear Mr. Pfost,

Ocean Trails has been requested by the Rancho Palos Verdes City Council to provide a review of existing water control requirements for the residential lots in Tract 50667 and Tract No. 50666 of the Ocean Trails Project to confirm that they will provide an adequate level of monitoring and control for those lots.

Currently water control requirements for the Ocean Trails residential lots are included in four documents:

A. AS-GRADED GEOTECHNICAL REPORT for Lots 1 through 36 in Tract 50667, 4/10/2000 (similar report to be submitted for Tract 50666).

B. *AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS, OCEAN TRAILS, LOS ANGELES COUNTY, CALIFORNIA, March, 2000.*

C. *Operations and Maintenance Manual for Water Control, Groundwater Monitoring, and Ground Movement Monitoring Facilities at the Ocean Trails Golf Course, Rancho Palos Verdes, Converse Consultants, October 4, 2000*

D. *Rancho Palos Verdes Development Code Section 15.34.070 Irrigation system design*

An analysis of the requirements contained in these documents follows:

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A. AS GRADED GEOTECHNICAL REPORT for Lots 1 through 36 in Tract 50667, 4/10/2000 (similar report to be submitted for Tract 50666) (As-Graded Geotechnical Report)

General recommendations for residential lot development and building pad drainage were presented in Converse's As-Graded Geotechnical Report. The report has been approved for the residential areas for tract 50667; the same requirements will be placed on the lots in 50666.

The City will enforce these requirements, and the other requirements not related to this issue, as part of the review process for the issuance of building permits for the construction of residential homes in each tract.

5.4 Building Pad Drainage

Final building pad grades should be graded to provide adequate positive drainage away from the exterior walls of the residence(s) and to prevent ponding of surface water. Finished surface grades should be sloped away from the exterior walls at a minimum two percent gradient for paved areas, and minimum four percent gradient for exposed soil areas. Exterior weep screeds should be placed a minimum of four inches above earth or two inches above paved areas in accordance with the Uniform Building Code.

Roof gutters and downspouts should be installed along all of the roof eaves to control roof runoff. Downspouts should be installed to convey runoff from the gutters, through a closed system, to side yard area drains, and then to the street.

Area drain systems should be installed in the yard areas around the residence(s) to prevent ponding of surface water and prevent excessive surface moisture from infiltrating into the subgrade soils. Ponding and flooding of the yard areas, planters and lawn areas should not be permitted. Excess water and runoff should be collected with area drain systems and non-erosive surface drains. All roof and pad drainage should be directed away from slopes and around structures to approved disposal areas. Uncontrolled surface runoff should not be permitted over the top of slopes or walls.

The homeowners should be made aware of the potential problems which may develop when drainage is altered through construction of retaining walls, planters, gardens, swimming pools, spas, paved walkways, terraces and patios. Whenever homeowners plan significant topographic modifications of their lots or slopes, a geotechnical consultant should be contacted for design recommendations. Oversteepening of slopes may result in a need for expensive retaining devices, while undercutting the base of slopes may lead to slope instability or failure. These modifications should not be taken without expert consultation.

5.5 General Recommendations for House Plans

5.5.1 Roof Gutters: Roof gutters and downspouts should be installed along all the roof eaves to control roof runoff, especially along the side yard areas of each of the residences. Downspouts should be installed to convey runoff from the gutters, through a closed system, to existing yard area drain systems. If existing side yard drains do not exist, area drain systems should be installed to prevent ponding and convey the water to

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the street or suitable non-erosive drainage device (terrace drains, bench drains, etc.). Surface drain systems and subdrain systems should be kept separate.

5.5.2 Surface Drainage: Existing surface grades should be modified to provide adequate positive drainage away from the exterior walls of the residence to prevent ponding of water, and to reduce percolation of water into foundation soils or wall backfills. Finished surface grades should be sloped in the landscape areas and paved areas to provide positive drainage flow to area drains or the street. Finish surface grades should be established below the existing stucco weep screeds at a minimum of 4 inches above earth or 2 inches above paved areas in accordance with UBC Building Code Section 2506 (1997 Edition, Volume 1, page 263).

Ponding and flooding on the building pad and yard areas should not be permitted. Excess water and runoff should be drained off or collected with area drain systems. Surface grading should be performed to prevent ponding and excessive surface moisture from infiltrating into the subgrade soils. Low spots and level spots should be graded to prevent ponding in the yard areas. Surface drainage should not be permitted to flow uncontrolled over the top of slopes.

5.5.3 Waterproofing: Subterranean walls enclosing interior living spaces or moisture-sensitive areas should be waterproofed to prevent moisture problems. Adequate ventilation of basement sections below floors should be provided. Passive or active ventilation systems should be built into basement areas and crawl spaces with structural floors to prevent moisture and humidity build-up beneath the floor areas. Floor slabs located below grade should be properly drained and waterproofed. Waterproofing of the foundation walls and floor slabs should be performed in accordance with Appendix Chapter 18 of the 1997 Uniform Building Code (Volume 2).

5.5.4 Foundation Subdrains: Suitable subdrain systems should be installed around the perimeter of the subterranean walls enclosing interior living spaces or moisture-sensitive areas to provide adequate drainage and prevent water pressure buildup behind the walls. The subdrain should be constructed of a Schedule 40 PVC pipe, or better, perforated subdrain pipe bedded and blanketed by a permeable drain material and placed at the top of the footing level behind the walls. Perforated pipes should be laid with perforations down. The drain pipe should be connected with glued manufactured pipe fittings, couplings and caps and sloped at a minimum 2% gradient to provide gravity flow to a suitable disposal point. The permeable drain material should extend from the top of the footing to within two feet of the ground surface. The subdrain should be continuous around the perimeter of the wall footing and discharge into a suitable, non-erosive drain outlet. Subdrain systems and surface drain systems should be kept separate.

5.7 Maintenance and Irrigation

Homesites in general, and hillside lots in particular, require periodic inspection and maintenance for proper upkeep and to help assure their continued stability. Most soil-movement problems are associated with water and site drainage. The homeowner(s) and Homeowners' Association should be advised of their responsibility of maintaining adequate positive drainage. Drainage-related items requiring periodic maintenance by the homeowner or Homeowners' Association include:

- *Roof gutters, downspouts, area drains, and drainage devices should be kept clean of debris and maintained in good working order to provide adequate drainage for the yard and roof areas.*

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- *Care should be exercised to prevent loose fill and debris from being placed near area drains and outlets.*

- *Adequate surface drainage should be maintained around the residence to prevent ponding of water and subsequent infiltration of water into the subgrade soils.*

- *Earth berms, side swales, and non-erosive drainage devices should be installed to prevent water from flowing over the slopes and walls. It is important these devices be maintained and free of obstruction.*

- *Leakage from swimming pools, spas, decorative pools, fountains, water lines, etc., should be stopped and repaired as soon as possible. Wet spots on the property may indicate a broken line.*

- *Periodic inspections of the slope areas, interceptor drains, terrace drains and downdrains should be performed to check for proper operation. These drainage devices should be checked before the winter rainy season and before and after major storms.*

- *Interceptor drains, terrace drains, downdrains, drain pipes, catch basins and drainage devices should be kept clean of debris and maintained in good working order to provide adequate drainage for the slope area. Control joints and cracks in these devices should be sealed and/or resealed to prevent infiltration of water.*

- *Subsurface drain outlets, subdrain outlets, catch basin vaults, and weepholes should routinely be checked for proper operation and cleared of silt and debris. Rodent guards and backflow preventers should be maintained to prevent nesting, clogging or damage to the subdrain systems.*

- *Rodent activity should be controlled to prevent loosening of soils and water penetration. Animal burrows should be filled with compacted soil since they may cause diversion of surface runoff, promote accelerated erosion, or cause shallow slope failures.*

- *Landscape watering should be controlled and be just sufficient to sustain plant growth. Seasonal adjustments to the amount of watering should be performed prudently, with periodic monitoring and regulation. Slope areas should not be overwatered. Sprinkler and irrigation systems should be maintained and adjusted to prevent overwatering of lawns, gardens and slopes.*

- *Slope planting should be maintained for erosion control. Nylon and jute netting should be maintained on slopes until a dense growth of vegetation has been established. Graded slopes may require more time to establish plant growth. The optimum goal of planting is to achieve a dense growth of vegetation (which includes plants of varying root depths) requiring little watering. Bare spots, areas of little growth, and areas with deteriorated mesh may have to be re-seeded and re-covered with new mesh for erosion control.*

- *Loose soils, plant cuttings and debris should not be permitted to accumulate on the slopes. Slopes and yard areas should be properly cared for and maintained to prevent damage to neighboring properties.*

- *Yard improvements such as patios, walkways, planters, fences, etc., should be designed and built to prevent damming and ponding of water and infiltration of water into the subgrade soils.*

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B. *AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS, OCEAN TRAILS, LOS ANGELES COUNTY, CALIFORNIA, March, 2000.* (CC&R's)

The following requirements are included in the CC&R's for the project. This document is recorded against each residential lot. The City will enforce them as a part of the review process for the landscaping plan required for each residential lot. The CC&R's also require property owners to comply with the provisions of the Water Control Plan.

15.3 Irrigation System Standards. All proposed irrigation within Ocean Trails, which includes, but is not limited to, the Lots within the Covered Property, are subject to the standards of the Ocean Trails Water Control Plan as reviewed and approved by the City Council and shall be consistent with City of Rancho Palos Verdes Municipal Code Section No. 15.34, "Water Conservation in Landscaping." Declarant shall be responsible for submitting an audit report every sixty (60) days for review and approval by the Director of Planning, Building and Code Enforcement, which details the compliance of all portions of Ocean Trails within the Covered Property, except the Lots that have been conveyed to individual purchasers, with the Ocean Trails Water Control Plan and consistency, where applicable, with Municipal Code Section No. 15.34. If it is determined by the Director of Planning, Building and Code Enforcement that any such irrigation is not in compliance with either the Ocean Trails Water Control Plan or Municipal Code Section 15.34, or is causing any impact on Ocean Trails, Declarant shall be required to halt all irrigation in the subject area until any such problem has been remedied to the satisfaction of the Director of Planning, Building and Code Enforcement.

1.4 Landscaping Improvements.

***Approval of Plans**. Landscape planting and irrigation plans for each Lot shall be submitted to the Director of Planning, Building and Code Enforcement for review and approval prior to installation of any irrigation system.*

***Date of Completion**. Landscaping and installation of irrigation within the frontyard of a Lot must be completed within One Hundred Twenty (120) days of the date of the initial occupancy of the dwelling located upon such Lot and the rear yard landscaping and irrigation must be installed within One Hundred Eighty (180) days of the date of the initial occupancy of the dwelling located upon such Lot.*

***Status Report**. Declarant shall keep the City informed as to the status of each landscape plan by providing a table listing all of the Lots, the date of building permit issuance, date of the Close of Escrow, and the deadline by which landscape plans must be submitted based upon the date of the issuance of the building permit or Close of Escrow.*

***Standards**. Landscape and irrigation plans must be consistent with the standards of the Ocean Trails Water Control Plan. Furthermore, notwithstanding any exemption contained in Chapter 15.34, each Lot shall comply with Chapter 15.34 with respect to irrigation and drought tolerant plantings as determined by the Director of Planning, Building and Code Enforcement.*

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C. *Operations and Maintenance Manual for Water Control, Groundwater Monitoring, and Ground Movement Monitoring Facilities at the Ocean Trails Golf Course, Rancho Palos Verdes, Converse Consultants, October 4, 2000* (Operations and Maintenance Manual).

The following requirements are included in the Operations and Maintenance Manual. The requirements of the Water Control Portion of this document are divided into four sections: Golf Course, Parks, Landscaping & Open Space Lots, Habitat Areas, and Residential Areas. Requirements included in both the "Golf Course" and "Residential Areas" sections of the plan affect water control for the residential areas. The required monitoring supervised by the project's geotechnical consultant on the golf course also monitors conditions in the residential areas because of the locations of the monitoring wells. A map showing the relationship of the monitoring wells, inclinometers and horizontal drains to the residential areas is attached as Exhibit A.

A key component of the monitoring plan is the monthly inspection and cleanout of drains. The location of those drains is shown on the attached Exhibit B. The golf course Superintendent is required by the Plan to submit monthly audit forms signed by the staff person who performed the work. A sample audit form is attached as Exhibit C.

The report required by the *Operations and Maintenance* must be submitted on a quarterly basis by the Golf Course Superintendent. The City will have the opportunity to review the maintenance and monitoring activities performed and require changes.

Water Control Plan

INTRODUCTION & GENERAL REQUIREMENTS

1. An Irrigation Status Chart showing the status of each area will be submitted to the City every 60 days starting with the adoption of this plan by the City Council until all plans are fully implemented and released by the City.

2. The Project shall submit an audit report (on forms included below) every 60 days for review and approval by the Director of Planning, Building & Code Enforcement which details the Project's irrigation system's compliance with the Water Control Plan and consistency, where applicable, with Municipal Code Section No. 15.34.

3. If it is determined by the Director of Building, Planning & Code Enforcement (Director) that any irrigation is not in compliance with either the Ocean Trails Water Control Plan or Municipal Code Section 15.34, or is causing any impacts to the project site, the Director shall provide notice to the developer requesting corrections within a reasonable time period. If the developer does not correct the problem within that time period, the Director may require the developer to halt all irrigation in the subject area until any such problem has been remedied to the satisfaction of the Director.

4. Landscape Plans shall satisfy the following conditions:

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A. As a part of the approval application plan, the landscape designer of each system shall certify that any landscape plan complies with the requirements of RPV Development Code Section15.34.070.

B. All irrigation plans for the Project must have a letter from the Project geologist stating that the system will not impose any significant geologic impacts to the project site. Prior to the approval of any landscape plan, this letter must be reviewed and approved by the City's geologist and the plan must be reviewed and approved by the Planning Department and the Department of Public Works.

8.2 Golf Course

Description

The golf course is a 102 acre site. The irrigation plan was designed by Neal Iverson and installed by Neibur Golf under the supervision of Western Golf Properties.

Golf Course Irrigation System

The golf course irrigation system is to be monitored and controlled by a computer system and checked daily by golf course personnel. The computer system includes a local weather station, central computer controller, and local control stations to closely control and monitor the amount of water applied to the grounds. The soil moisture levels within the root zone are checked daily in the field by golf course personnel with small tube core samplers to check and prevent over watering. Local control stations are periodically checked and adjusted in the field by golf course personnel.

Landscape watering and golf course watering should be carefully controlled and maintained. Watering shall be sufficient to sustain plant and grass growth and prevent dessication of the protective clay cap soils. Sprinklers, irrigation devices and systems shall be maintained and adjusted to prevent overwatering of lawn areas, greens, landscaped areas and slopes. Seasonal adjustments to the amount of watering should be performed prudently, with periodic monitoring and regulation.

8.2 Golf Course

***Irrigation Controls**: The golf course was designed to control all water use and to prevent any water from percolating into the underlying rocks. The following features were included to accomplish these goals:*

- *A 3'-thick clay cap placed under all irrigated areas of the golf course, including habitat areas within the course.*
- *A subdrain system installed under all turf areas to collect any water that might reach the sand layer below the turf. This collected water flows directly into one of the lakes on the site, or to a sump from which it is pumped to the lakes.*
- *Double lining and a clay cap under the three lakes on the project.*
- *Monitoring wells capable of being converted to dewatering wells installed in 9 clusters of 3 wells at locations throughout the course.*
- *A computer*-controlled golf course irrigation system to minimize overwatering.*
- *An on-site weather station* to calculate the evapo-transpiration rate on an ongoing basis through the day so that the irrigation is adjusted automatically.*
- *Automatic shutoff valves* to turn the system off if it detects a leak.*
- *An automatic station controller* to turn the system off during and after rain.*

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- *Drought tolerant landscaping used for approximately 40% of the golf course's planted areas, as shown on the Area Takeoffs map*.*

Monitoring & Reporting Requirements:

1. *A staff of three irrigation specialists will monitor the operation of the Project's irrigation systems on a daily basis.*
2. *The monitoring wells will be checked on a monthly basis.*
3. *All water features will be inspected on a monthly basis.*
4. *Monthly pressure testing will be done for main irrigation piping systems to check for leaks.*
5. *The required audit report will be submitted to the Director of Building, Planning & Code Enforcement at the City every 60 days, detailing the Project's compliance with this Plan.*
6. *The Golf Course Superintendent shall be responsible for ensuring that all of the monitoring requirements are met, and shall submit the Audit Report as required.*
7. *If monitoring determines that notification of the Project's Geotechnical Consultant is necessary according to the requirements of the Groundwater Monitoring Plan, it shall be the Golf Course Superintendent's responsibility to make that notification immediately.*
8. *All leaks shall be repaired within 24 hours following detection.*

RESIDENTIAL AREAS

Description – There are two residential tracts within the Ocean Trails Project, Costa Verde (Tract 50667) and Tract 50666.

Irrigation Controls:

- *The residential areas to be graded with on-site clay soils with low permeabilities to minimize potential infiltration into the underlying stratigraphy*
- *All homes to have automatic controllers that limit watering during rain.*
- *All controllers to be located outside of structures so that City officials can have access in case of emergency.*
- *Drainage for each area to be provided by a system that controls drainage adequately.*
- *CC&Rs* for the homes placing legal requirements on residential property owners:*
- *That all residential landscaping plans be approved in advance by the City of Rancho Palos Verdes*
- *That no modifications to drainage be made without City review and approval,*
- *That all residential systems have automatic controllers capable of being seasonally adjusted.*

Monitoring & Reporting:

- *The developer shall be responsible for keeping the City up to date on the status of each individual lot landscape plan. This shall take the form of a table that lists all of the lots, their date of building permit issuance, date of close of escrow, and the maximum deadline to submit a landscape plan based upon building permit or close of escrow. The developer shall be responsible for submitting an updated table each time a building final*

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is issued and at close of escrow. Landscape and irrigation plans shall be consistent with the standards of this plan. As a part of the approval application plan, the landscape designer of each system shall certify that any residential landscape plan complies with the requirements of RPV Development Code Section 15.34.070.

(Asterisks indicate documents that are included as attachments to the Operation and Maintenance Manual. They are not included with this letter.)*

B. Rancho Palos Verdes Development Code Section 15.34.070 Irrigation system design criteria

Although normally this ordinance does not apply to single-family home landscaping, the City, through the CC&Rs and the Water Control Plan, has required that all residential owners submit a landscaping plan and that the provisions of RPV Development Code Section 15.34.070 apply to those plans. These provisions will be enforced when the City reviews and approves each landscaping plan.

***15 .34** WATER CONSERVATION IN LANDSCAPING*

***15 .34 .070** Irrigation system design criteria.*

A. Irrigation systems shall be designed so that the application rate does not exceed the soil infiltration rate in order to minimize overspray and runoff. The designer shall refer to the soil infiltration rates in the guidelines established to implement the provisions of this chapter and the results of the site specific soil tests required by Section 15.34.040(D)(5).

B. Irrigation stations shall be separated (e.g. drip versus overhead spray systems). Additional control valves shall be installed to account for different site-specific characteristics (e.g., full sun/full shade, level/sloping, shrubs, street trees, etc.).

C. Maximum sprinkler spacing for both turf and non-turf areas shall be equal to the radius of the throw. Spacing of sprinklers shall take into account prevailing wind conditions.

D. All irrigation systems shall be operated by an automatic controller. At a minimum, each controller shall have a rain shutoff device, a seven-day calendar, two independent programs, and a minimum two cycles/day capability.

E. The irrigation system shall be designed to allow a complete watering cycle within a seven-hour period.

F. All turf areas shall utilize either pop-up rotor or impact heads or spray heads with a minimum riser height of three inches. Turf areas which exceed two thousand five hundred square feet shall use soil moisture sensors and rain shutoff devices as a part of the irrigation system. Device type and installation shall be per manufacturer's recommendations.

G. Low-volume sprinkler heads, drip emitters and pressure compensation bubblers shall be used throughout the irrigation system.

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H. The irrigation system shall be metered for irrigation water use, separately from domestic and other nonlandscape uses. (Ord. 284 § 1 (part), 1993)

Ocean Trails is confident that these measures provide adequate control of water use in the residential areas of the Ocean Trails Project.

Sincerely,

Barbara Dye
Environmental Consultant
As agent for VH Properties

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COTTON, SHIRES & ASSOCIATES, INC.
CONSULTING ENGINEERS AND GEOLOGISTS

November 20, 2002
EC0008

Mr. Greg Pfost
Senior Planner
City of Rancho Palos Verdes
30940 Hawthorne Boulevard
Rancho Palos Verdes, CA 90275

SUBJECT: Geotechnical Review of Proposed Water Control Features For Phase 1 Residential Lots, Tract 50667

RE: The Ocean Trails Development
Rancho Palos Verdes, California

Dear Mr. Pfost:

In accordance with your request, Cotton, Shires and Associates, Inc. (CSA) has performed a geotechnical review of the proposed water control features for Phase 1 residential lots at the Ocean Trails Development in Rancho Palos Verdes, California. Our review was completed using:

Geologic Review of Proposed Water Control Requirements for the Ocean Trails Residential Lots Dated September 24, 2002, Ocean Trails Development, Rancho Palos Verdes, California (report) by Converse Consultants;

Letter (untitled) to Greg Pfost, Deputy Planning Director City of Rancho Palos Verdes, dated September 24, 2002, by Ocean Trails regarding water control requirements in Tract 50666 and Tract 50667;

As-Graded Geotechnical Report for Lots 1 through 36 in Tract 50667 (report) dated April 10, 2002; and

Rancho Palos Verdes Municipal Code-Section 15.34.

It should be noted that our review **corresponds only to the residential lots (Lots 1 through 36) in Tract 50667.** Issues regarding water controls at the Ocean Trails Golf Course will be addressed in the final Groundwater Monitoring and Control Plan to be submitted subsequent to the completion of repairs at Landslide C. Development plans and design features for mitigation of geotechnical constraints on the Phase 2 residential development (Tract 50666) have not been finalized and approved and will likely affect the proposed groundwater control plan in that area. Therefore, it should not be inferred that approval of any portion of the Tract 50667 water control plan would constitute approval of any portion of the golf course water control plan or the Tract 50666 water control plan.

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Water Control Plan_SR.pdf

Summary Site Geologic and Geotechnical Conditions

The Ocean Trails site is underlain by the Altimira Shale member of the Monterey Formation. The Altimira shale is mantled in some portions of the site by Pleistocene marine and non-marine terrace materials. The residential lots of Tract 50667 are generally underlain by Altimira shale, terrace deposits and compacted fill. Converse Consultants indicates that the on-site soils consist primarily of clays soils. This would imply that the soils have a relatively low permeability.

In the area of Tract 50666 and the Ocean Trails golf course two predominant continuous seaward dipping bentonite clay layers have been identified. These layers have been labeled as the Upper and Lower Bentonite layers (UBL and LBL) by Converse Consultants (CC). The UBL defines the base of the recently active Landslide C on the golf course. Special provisions for groundwater control including a clay cap barrier and monitoring wells that can be converted to extraction wells (if needed) have been incorporated into the golf course design and construction. Incorporation of these features is intended to help prevent buildup of groundwater above these two layers and associated slope instability along the blufftop areas at the south side of the golf course. CC indicates that at the east end of the property (east of La Rotunda Canyon) these clay seams are not present and therefore would not pose an impact to the stability of the eastern portion of the site which includes Lots 1 through 36 of Tract 50667.

Conclusions

Based upon our review of the subject documents, it is our opinion that the proposed water control provisions are acceptable from a geotechnical standpoint. These control measures should be incorporated into the design and construction of the proposed residential improvements at the site and incorporated into the CC&Rs for the development.

Limitations

Our services consist of providing technical advice to the City in its discretionary permit procedures. Our services are limited to review of documents provided by the City and the Project Geotechnical Consultant and reconnaissance-level observations. Our opinions, conclusions, and recommendations are made in accordance with generally-accepted principles and practices of the geotechnical profession. No other warranty, expressed or implied, is made by providing our services on this project.

We appreciate the opportunity to be of service. If you have any questions regarding our proposal, please call at your earliest convenience.

Respectfully Submitted,
COTTON, SHIRES AND ASSOCIATES, INC.

Stanley Helenschmidt
Managing Geotechnical Engineer
GE 2064 (exp. 06/30/04)

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OCEAN TRAILS

SITE PLAN (PREPARED BY CITY STAFF)